



ARTICLE

## On embracing the vague

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At the same time as, in Paris, Lucien Lévy-Bruhl experimented with the concept of “participation,” at Harvard, William James undertook a parallel trajectory by taking recourse to the notion of “the vague.” For him, *vagueness* described the fact that reality is richer than any and all conceptualizations. In light of the ethnographic material provided by contemporary developments in the ethnography of pharmaceuticals, this paper mobilizes James’s concept of vagueness by reference to Lévy-Bruhl’s *participation* in order to develop instruments for capturing ethnographically the complexities of entanglement and emergence in human sociality. The paper concludes that indeterminacy and underdetermination are doors of entanglement as they both limit and make possible the constitution of entities in sociality.

Keywords: vague, participation, William James, Lévy-Bruhl, Schütz, emergence, entanglement, indeterminacy, underdetermination

*Every species is vague, every term goes cloudy at its edges, and so in my way of thinking, relentless logic is only another name for stupidity—for a sort of intellectual pig-headedness.*

H.G. Wells 1904: 386

At the turn of the twentieth century, in Paris, Lucien Lévy-Bruhl was experimenting with the concept of “participation” in order to respond to the challenges posed to neo-Kantian received wisdom by the ethnographic evidence that was then emerging concerning how people behaved in premodern societies. At much the same time, at Harvard, as he developed the philosophical underpinnings of his psychology, William James was undertaking a parallel trajectory by taking recourse to the notion of “the vague.” For him, vagueness described the fact that reality is richer than any and all conceptualizations (Gavin 1992: 178, also 29). In the philosophy of logic, “vague” is a technical concept with a very specific definition (Williamson 1994; Egré 2019). Here, however, I will depend on the way James defined it. By calling for an “embrace of the vague,” he was advocating an approach to the study of human sociality where ambivalence, ambiguity, equivocation, fuzziness, and gradualism are not taken to be enemies of thought, but, on the contrary, their very condition of possibility.

Inspired by the evidence provided by contemporary developments in the ethnography of pharmaceuticals (e.g.,

Lovell 2006; Sanabria 2016), this paper mobilizes James’s concept of the *vague* by reference to Lévy-Bruhl’s *participation* (see Pina-Cabral 2018a) in order to develop instruments for capturing ethnographically the complexities of entanglement and emergence as enduring features of human sociality. In adapting the insights of these authors from a century ago to our present theoretical and empirical concerns, I mean to liberate them from the background assumptions that cast an aporic shadow over both Lévy-Bruhl’s “mystical participation” and James’s “ontological wonder-sickness” (Gavin 1992: 12) and that manifested themselves in the analytical problems facing the work on vagueness of a long line of subsequent social researchers, particularly in the wake of Alfred Schütz (1943).

### Rationality as aporia

Both James and Lévy-Bruhl were faced with the need to take into account evidence that appeared to be problematic in the light of received theories of rationality, as it challenged the modern, supposedly scientific, outlook





on the world. Their use of the concepts of vagueness and participation, respectively, was a response to this perceived need. Lévy-Bruhl ([1910] 1951) insisted on the “mystical” nature of “primitive thought.” But, contrary to what many of his critics seem to think, this did not mean he thought “primitives” to be irrational. In their individual capacity, these people were bound by rationality as much as anyone else:

As an individual, to the extent that he thinks and acts independently of his collective representations—so far as that is possible—a primitive man will feel, consider, and act most often in the way we would expect him to. The inferences that he will make will be precisely those that would seem reasonable to us under the same circumstances. (Lévy-Bruhl 1951: 79, my translation)

The thought of “primitives,” however, seemed to be bound by attachments to their collective belongings that prevented them from being free to engage in logical thinking, as modern scientists were meant to do. The presence of the collective in the “individual,” thus, appeared to be inimical to Reason. It is only in 1938, at the end of his long life, that Lévy-Bruhl finally finds a path towards reconciling the ethnographic evidence of participation with the universal human condition (see Lévy-Bruhl [1949] 1998). Participation, after all, turned out to be present in all human beings as it was a founding condition for becoming a person.

In turn, William James is quite explicit about the aporic nature of his struggle with “vagueness” as a general feature of humans in the world ([1879/1882] 1905: 63–110): “Existence then will be a brute fact to which as a whole the emotion of ontological wonder shall rightfully cleave, but remain eternally unsatisfied” (ibid.: 75). Ultimately, what was at stake in both cases was the surprising discovery that, although in our daily lives we are rational in that we aim to fit means to ends, Reason has clear limits in human life.

In his writings, the American pragmatist philosopher repeatedly called for “the re-instatement of the vague and inarticulate to its proper place in our mental life” (1892: 165). In fact, James’s insistence on the theme was not at all limited to a comment on the formal nature of social categories; it carried broader implications about the nature of the world that confronts humans. He was pointing to a condition of incompleteness in all human experience. Indeed, in his study of the American philosopher’s lifelong fascination with the theme, William J.

Gavin points out that James “is arguing against certainty, that is, against the usurping of the privileged position of center stage once and for all by any formulation of the universe” (Gavin 1992: 2). As the American philosopher put it, “an analysis of the world may yield a number of formulae, all consistent with the facts” (James 1905: 76). In other words, for James, the question has two aspects because not only is inarticulateness an inescapable condition of human concepts, but vagueness is a feature of the very world: “wonderfulness or mysteriousness will be an essential attribute of *the nature of things*, and the exhibition and emphasizing of it will continue to be an ingredient in the philosophic industry of the race” (1905: 75, my emphasis).

Therefore, to phrase it in a more contemporary language, we can take James to be arguing that the permeability of entities implies that *metaphysical pluralism* is an unavoidable condition of life.<sup>1</sup> Note that we are not using metaphysical pluralism here as equivalent to what has been called “ontological pluralism”—which would imply a plurality of worlds.<sup>2</sup> We use it more in line with what Brian Epstein in his survey of the debates on divination calls “moderate pragmatic pluralism” (2010: 1077). The pluralism in question is “metaphysical” to the extent that it allows for seeing the world as creation—for a reflexive posture before the world—and it is “pluralist” not because there are different worlds but because no world is ever complete and closed onto itself.

In this regard, Lévy-Bruhl, too, remains puzzled by a sense that his account of participation cannot, after all, be limited to an error of thinking by a particular group of people, since it applies to the world more generally. His more direct confrontation with metaphysical pluralism is moved by an article published in Paris by Einstein that suggests to him that the problem goes beyond a mere issue of distinct *formes mentales*:

1. For a development of the latter concept, see Pina-Cabral 2017: 135–80.
2. The idea of metaphysical pluralism only partly overlaps with that of “pluriverse” such as, for example, Marisol de la Cadena and Mario Blaser propose: “heterogeneous worldings coming together as a political ecology of practices, negotiating their difficult being together in heterogeneity” (2018: 4). The idea of metaphysical pluralism is not to be parsed into separate “ontologies” since it applies to emergence and entanglement in general.



Compared to the rational world of our sciences, the mythical world is not intelligible, it is imaginary, it cannot be real: how come then, although it is irrational (riddled with impossibilities and absurdities), primitive mentality takes it seriously as real? Yet, at the same time that we search for an answer to this question, [Einstein inspires us to believe that] the intelligibility of the rational world is itself unintelligible. Could it just be a matter of degree—a transfer of the unintelligibility of the part to the unintelligibility of the world as a whole? (Lévy-Bruhl 1998 [note dated July 1938]: 48, my translation)

If looked at in terms of the metaphysics they imply, the two authors' attitudes differ not in substance but in a matter of perspective. James's concern with pragmatism ("futuricity," as he sometimes calls it) means that his concept of vagueness favors the coming-to-be angle of approach: human action based on intentions, he claims, will ever remain vague. By contrast, Lévy-Bruhl's insistence on primitiveness as elementariness favors the angle of "having-become" in the sense that he focuses on the conditions which lead to a person's incapacity to free themselves from attachments. Lévy-Bruhl's "participation," therefore, must be seen as reflected in James's "vagueness," and vice versa.

For the French philosopher, in 1939, at the end of his life, participation had come to represent the ambivalent encounter between the singular and the plural in the formation of the person in the world (Pina-Cabral 2018a: 436), an aspect that the American philosopher covers explicitly in his call for vagueness. Both authors were struggling with a theme that was going to be central to debates in the social sciences throughout the twentieth century: the question of rationality. Both *participation* and *vagueness* challenged accepted Cartesian notions of rationality and reasonable behavior.

Over the succeeding century, this theme has repeatedly emerged in ethnographic analysis as an apparent paradox, since it runs counter not only to individualism, but more broadly to what Karen Barad calls the *atomistic background assumption*. By this she means "an entire tradition in the history of Western metaphysics" that assumes "the world is populated with individual things with their own independent sets of determinate properties" (Barad 2007: 19). In anthropology, at midcentury, the aporias surrounding witchcraft as a mode of participation were the highpoint of this debate. The *locus classicus* of this discussion is, of course, Evans-Pritchard's account of Azande witchcraft ([1937] 1976), which was

directly inspired by Lévy-Bruhl (Evans-Pritchard [1934] 1970). Yet, the problem presented itself not only as a challenge to rationality but also to ethical integrity. The classical instance in this regard is Julian Pitt-Rivers's discussion of the uncertainty of relations in Mediterranean cultures and, in particular, his development of what he calls "the paradox of friendship" (2017: 199–210). In sociology, too, the debates concerning rationality and James's radical denial of it played a very similar role.

### Atomistic minds

Inevitably, as has been the case with Lévy-Bruhl's participation (e.g., Sahlins 2011a, 2011b), we have also recently witnessed a reemergence of discussions bringing to life again James's concern with vagueness. For example, in discussing how to account for the role of "atmosphere" in ethnographic writing, Mikkel Bille develops a sophisticated methodological critique of the proneness to stress the clarity of our respondents' understanding of things and concepts. He argues that not only are objects dependent on their context, but they are not the same from different perspectives. Undecidedness, he stresses, is a constant of everyday encounters. Inspired by Edwin Ardener, Bille speaks of how the social encounters that ethnography describes correspond to "synchronisms of meaning, action and object" (2015: 265; Ardener 1992, 2007). Arguing in favor of taking vagueness seriously as an aspect of sociality, he stresses the need to focus on the "in-betweenness beyond the collapse of representation-presentation dichotomies" (Bille 2015: 269).

Similarly, in a recent article, Bryan S. Green—a sociology professor at the University of York—argues that "sociology's subject-matter, the social, is ontologically rooted in an essential ambiguity between abstraction and individuation" (2019: 109) and that it is, therefore, indispensable to find ways of preserving "the essential ambiguity of the social rather than having the effect of negating, dispelling, distorting, misreading, or mistaking it" (2019: 125). In his paper, Green traces how this is a long-term problem in sociological theory. Behind Durkheim's collectivist account of the emergence of the social ([1912] 1960), he claims, as much as behind Simmel's individualist account, lays the challenge of irresolvable ambiguity.

Unfortunately, in line with his inspiration in the work of Pierre Bourdieu, Green stops the argument at the "ambiguity between abstraction and individuation." Yet,



in order to account for “knowledge” we have to grasp the nature of the knower: the entities that produce the ambiguity. And these are not only vague but also participatory. In his argument, Green is unwittingly validating an approach to social life that remains rooted in a mentalist account—one that assumes a mind/matter polarity. Such an approach ultimately fails to question the nature of the subject, implicitly validating a Parsonian atomistic hegemony. As it happens, this truncated understanding of James’s argument has a long history that goes back to the immediate post-World War II period.

Shortly after his arrival in the United States in 1939, Alfred Schütz published an article where he attempted to follow up Max Weber’s epistemological suggestions concerning “ideal types” by integrating them with William James’s critique of rationality. Titled “The problem of rationality in the social world” (1943), this essay has become justly famous. Its main argument may be summarized by the following sentence: “Our knowledge remains incoherent, our propositions occasional, our future uncertain, our general situation unstable” (ibid.: 144).

In those days, Talcott Parsons was the great gatekeeper, playing a similar role in the United States to that which Durkheim had played in France fifty years earlier. As a recent refugee from Vienna, Schütz felt obliged to start by acknowledging the big man’s presence. His paper, therefore, starts with a quote of Parsons, where the latter declares his positivist theory of rationality: “Action is rational in so far as it pursues ends possible within the conditions of the situation, and by the means which, among those available to the actor, are intrinsically best adapted to the end for reasons understandable and verifiable by *positive empirical science*” (in Schütz 1943: 130, my emphasis). But then, curiously, Schütz’s essay evolves into a rather thorough critique of Parsonian positivism. His inspiration in James makes sense as, fifty years earlier, the latter’s argument had been meant as a vivid challenge of the kind of positivist assumptions that Parsons was going to personify at midcentury.

James had argued that, because “none of our explanations are complete” (1905: 67), “rationality [means] only unimpeded mental function” (ibid.: 75). Thus, he did not see rationality as a positive quality, but rather as a feeling (a sentiment) of intellectual accommodation. Whenever we hope to think of “an absolute datum” (ibid.: 71), James argued, the idea of a nonentity necessarily imposes itself. Therefore, “absolute existence is absolute mystery, for its relations with the nothing remain unmediated to our understanding” (ibid.: 72). What

this means is that, for James, the very ground of being is always left uncertain: we will never be able to eradicate “ontological wonder.” Contrary to Parsons, therefore, he concludes that rationality (scientific or otherwise) can never consist of anything but “a feeling of familiarity” (1905: 77), a kind of fuzzy adjustment to the world as it presents itself to experience.

Schütz’s paper starts from a notion of experience that he gathers from Husserl. He contrasts different “levels” of experience: namely, “the theoretical level” versus “other levels of our experience of the social world” (1943: 131). His choice of the term “level” for what we might call “modes” or “aspects” remains surprising as long as we fail to understand that he is, in fact, silently proposing a kind of evolutionary trajectory not unlike Lévy-Bruhl’s original trajectory from primitivism (as represented by non-Europeans) to modernity (as represented by scientists). Schütz takes history away from the evolutionary framework and transforms it into a synchronic map of the diversity between different modes of approaching the social: one level rational, others less and less so. He gives an example of the difference between the cartographer’s and the common man’s perspective on a city, where the latter is centered on “home” but the former is interested in the city “only for the purposes of drawing a map” (ibid.: 132). Between the two extremes, he places the foreigner (like himself, recently arrived in Manhattan), who is blessed with the capacity for experiencing the city’s strangeness but does not formulate it in neutral, purely unengaged, rational formulations.

Schütz’s proposal of a mentalist interpretation of conceptual vagueness remains atomistic, both in that he naturalizes the individuality of the knower and in that he merely shifts the focus of concept constitution from the boundaries of the concept (which are now seen as permeable and unclear) to the nucleus of the concept (as he calls it, the “unmodified meaning”): “the concept of rationality has its native place not at the level of the every-day conception of the social world, but at the theoretical level of the scientific observation of it, and it is here that it finds its field of methodological application” (ibid.: 143). Note how, for him, what is at stake in vagueness is not, as for James, to do with a feature of the world nor, as for Lévy-Bruhl, concerning the unitariness of the person, but rather an “every-day *conception* of the social world.”

In this way, Schütz manages to graft the evidence of vagueness onto the atomistic conception of personhood that was the order of the day at the end of the Second World War. He does not differ from Parsons in regard





to this individualism,<sup>3</sup> only in the latter's interpretation of how concepts are constituted (e.g., Schütz 1943: 135). In other words, Schütz takes participation out of vagueness, so to speak. But, in James's account, vagueness had been a feature of the world at large, not only of our ideas of it. The intellectual efforts of both James and Lévy-Bruhl went much further than a mere consideration of the nature of concept formation: for them, vagueness revealed to us that participation constantly challenges boundary setting, and participation revealed that the singularity of entities is always challenged by vagueness.

Closed in his individualistic and mentalistic conception of social interaction as based on concepts that do not correspond to reality (as reality would be precise and concepts imprecise), Schütz proposes that what the social sciences do is to create imaginary figures that are closed off from the world. He interprets James's metaphysical pluralism ("his profound theory of the different realities that we live in at the same time," 1943: 149) in a relativist manner. So Weber's ideal types become "puppets": "the scientist replaces the human beings he observes as actors on the social stage by puppets created by himself and manipulated by himself" (ibid.: 143). In short, he concludes that he does not "really know what reality is" (ibid.: 149) but, even although "the world of both the natural and the social scientist is neither more or less real than the world of thought in general" (ibid.: 149), science is at least useful, it is "performed within a certain means-ends relation, namely, in order to acquire knowledge for mastering the world, the real world, not the one created by the grace of the scientist" (ibid.: 148).

Schütz's 1943 essay was going to be very influential in subsequent sociological debates. However, the more famous example of its influence reads today almost like a caricature. I have in mind Harold Garfinkel's essay on "The rational properties of scientific and common sense activities" (1967: 262–83). Inspired by Schütz's original classification, Garfinkel proposes a list of fourteen forms of conduct that may be considered rational—he calls them "the rationalities" (ibid.: 264). He puts these to an empirical test and he concludes that of the original four-

teen only four constituted "scientific rationalities": "compatibility of ends-means relationship with formal logic"; "semantic clarity and distinctness"; "clarity and distinctness 'for its own sake'"; and "compatibility of the definition of a situation with scientific knowledge" (ibid.: 267–68). When Garfinkel asked his student-researchers to introduce the "scientific rationalities" into experimental everyday encounters, the results were so disturbing both for the students and for the subjects that they had to be discontinued. Garfinkel concludes: "The scientific rationalities, in fact, occur as stable properties of actions and as sanctionable ideals only in the case of actions governed by the attitude of scientific theorizing. By contrast, actions governed by the attitude of daily life are marked by the specific absence of these rationalities either as stable properties or as sanctionable ideals" (ibid.: 270).

Garfinkel's conclusion to his paper, therefore, is fittingly nihilistic: a person's behavioral environment is "senseless," and their system of interaction presents "disorganized features" (ibid.: 283). The whole exercise can be seen as a caricature of what can happen when one attempts to integrate vagueness into social analysis as a purely semantic feature, without taking into account its fuller metaphysical implications. Garfinkel's account, together with Schütz's before him, silently naturalized both an atomistic conception of persons as individuals and a mentalist conception of social cognition as separate from the world.

To the contrary, both James and Lévy-Bruhl had shown that to naturalize individual minds is to close oneself within a vicious circle of representation-presentation. Their concern with the nature of the knower in the world allowed them to see that singularity always emerges relationally—always incompletely, permeably, dividedly, partly. In conclusion, the lesson we take from contrasting these two moments in sociological theorizing is that we should adopt a conception of the way in which entities come to behave as entities in sociality where *vagueness* is the way to describe emergence from the angle of having emerged, and *participation* from the angle of coming to emergence.

No emergence (be it of a person or of an organism) is a clean launch—like a rocket that is freed from the world's atmosphere into the stratosphere never to return again. Rather, all emergence is a launch within—like a satellite that circles the earth, being tied in orbit by the earth's pull. This means that permeability between entities is inevitable, both as vagueness in terms of

3. In this regard, I call the reader's attention to Keith Tribe's interesting essay on Parsons's problematic translations of Weber and, in particular, to a comparison between Parsons's translation of Weber's text and a contemporary translation. Where Weber refers to "actor or actors," Parsons says "the acting individual," thus implicitly naturalizing and atomizing the person (Tribe 2007: 232).



determination of limits, and as participation in terms of superposition with the other entities that surround it. That is, the emergence of an entity—be it a person or an organism—involves a relation of entanglement between the parts that come together and the whole: the parts interact with the whole. As Karen Barad explains, “to be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence” (2007: ix).

One of the principal effects of atomism as a background assumption is to favor a view of the relation between means and ends that assumes that the bearers of rationality are individual. This casts into shadow the intrinsically public nature of all sociality, which is due both to participation (in that intentionality is always participatory at different levels of belonging) and to vagueness (in that the immersion of personal sense-making in complex processes of hegemony mobilizes underdetermination). At no point in spacetime does the singularity of persons (*anthropoi*) disentangle itself completely from the immersion in collective forms of life (*ethne*). The next section aims to give body to these insights by means of recent ethnographic evidence.

### Moving beyond anthropocentrism

As argued above, behind the individualistic and mentalist consensus that mostly characterized the second half of the past century, the paradoxes of rationality never completely vanished. In social anthropology, Needham's *Belief, language and experience* (1972) was perhaps the first major sign of the disquiet concerning the midcentury atomistic orthodoxy.<sup>4</sup> But Ardener's poststructuralist essays of the same period (e.g., 2007) are also equally prophetic in their attempt to break epistemological barriers. In the early 2000s, as the mindset characteristic of Parsonian thinking started to fade in the face of post-

structuralist critique, the insights implicit in the discussion on participation were again brought to the fore, both in the anthropology of kinship (Sahlins 2011a, 2011b; Pina-Cabral 2018b) and in the interaction between biology and anthropology—namely in the work of phenomenologically inspired philosophers such as Shaun Gallagher (2007, 2015) or Evan Thompson (2007) and, more broadly, in Radical Embodied Cognition (e.g., Chemero 2009; Hutto and Myin 2013). In this way, participation presents itself as a universal disposition of humans, being constitutive of persons (see Pina-Cabral 2016), metapersons (see Pina-Cabral 2019), and supra-personal entities (that is, broadly speaking, institutions—see Pina-Cabral 2011).

The new material that has been emerging out of feminist-inspired ethnography (e.g., Strathern 2004; Haraway 1989; Barad 2007) encourages us to see that, while the focus on personal ontogeny remains central to any anthropological discussion (Toren 2012), it is advisable to move beyond an anthropocentric perspective in considering how limits operate in the emergence of entities—not only limits between persons but between persons and other entities in the world (Ingold 2010). As Mauss had argued in his essay on the gift, “the law of things remains bound up with the law of persons” ([1923] 1967: 2). So, we must agree with Strathern's injunction that, if we take to heart Mauss's discovery that the thing given is personified, then we must realize that persons are also aspects of things (Strathern 1988). James's concept of vagueness, in that it applies both to forms of life and to life forms (Helmreich 2011), becomes a window into this complex process, helping us to break radically from the dichotomous injunctions of semiotic thinking, which separates form from substance, representation from presentation, mind from body, signifier from signified. It is precisely this aspect that contemporary ethnographic evidence is urgently asking us to reconsider.

In Emilia Sanabria's ethnography of the role of sex hormones in menstrual suppression in Bahia (NE Brazil) in the mid-2010s, the ethnographer explores what she calls the “leakages” between and among entities and substances—both persons and other aspects of the world (2016). As she puts it, “as sex hormones circulate globally, they leak between official and unofficial prescription regimes, reconfiguring bodies and socialities by circulating not only through blood, brain, and other body sites but also through social settings” (2016: 19). This circulation of substances is a challenge to the limits that demarcate entities, calling our attention to how the emergence of live entities in the world (both persons and others) is

4. As a reviewer of this paper commented, another possible pathway, which for reasons of lack of space I cannot explore here, might be found in social psychology and, in particular, in the work of Arnold Gehlen and his “theory of institutions.” As Peter Berger has commented (Berger and Kellner 1965), however, and for ethical reasons that remain on the whole valid, Gehlen's work never really had a significant impact beyond Berger's own influential essay with Luckmann (Berger and Luckmann 1966). For a critique of the background assumptions behind their work, see Pina-Cabral 2011: 488–90.



always accompanied by a vagueness of borders (what Palmié 2018 calls “ontological transgression”). The flow of substances between persons and environment is not something that happens at the margins of entities (and particularly of persons), but it is the very mode of their process of being (Hardon and Sanabria 2017). There is no moment before this circulation when entities were what they “really” were. If this kind of “leakage” is inescapable it is only because it is also a condition of emergence.

A limit (or border) is the point at which an entity uncouples from the earlier moorings of its parts, the point at which it shades or snaps into something else. Limits must be constantly enacted because, while limits draw out the essences of entities, the ground upon which an entity arises never vanishes, as it is its very condition of existence. In *World: An anthropological examination*, taking recourse to the example set by Saint Anselm’s Ontological Proof, I argued at length why an entity’s beingness can never be dissociated from its occurrence (Pina-Cabral 2017: 54–55).<sup>5</sup> As Helmreich has put it, “life forms and forms of life not only inform one another (especially after biopolitics) but the two may be impossible to disentangle” (2011: 693).

Hormone use in contemporary situations provides us with an excellent case study of this form of border vagueness. Yet hormones are not only used by persons who want to affect their own bodies in the course of processes of self-constitution (as in medical use for menstrual suppression or for sex change); they were always in operation as they circulated in people’s bodies, even before they were pharmacologically identified and synthetically manipulated. But the fact is that hormones “leak back,” as it were: they are also encountered in the environment affecting people’s bodies and their mutual relations. This happens now in that hormones have been pharmacologically freed from their former contexts of occurrence, but it has always happened in that hormonally mobilized communications (namely through smell) have always been a feature of life.

5. Marilyn Strathern suggests that, when I propose that essence and existence are interdependent, I am allowing for the reentry through the back door of the distinction between “reason” and the “real” (2020: 11–12). This only appears to be so due to her own relativist inclinations. Contrary to her, I am prone to emphasize the realism of one’s condition in the world. So, ultimately, our disagreement is more likely to be one of personality than properly one of outlook.

The impact of hormones, however, goes way beyond communication between organisms. For example, one morning in the coastal mangrove of Baixo Sul (Bahia, Brazil), where I was carrying out fieldwork, all of the crabs died and emerged floating in the calm waters of the mangrove (Pina-Cabral 2012). It was claimed by the local NGOs interested in environmental protection that this happened because the dike of one of the shrimp breeding plants to the north of the town of Valença had breached and the chemically polluted water spread throughout the mangrove’s waterways killing the crabs.<sup>6</sup> As crabs died, the economic situation of the fishermen whom I was studying at the time was severely affected (Pina-Cabral and Silva 2013). For people on the margin of indigence, such as this fishing folk living in state-owned mangrove forests, a sudden reduction in their expected mode of subsistence affects their capacity to support their families, pushing them to engage in salaried work in the towns, a form of work that they perceive as a kind of captivity because it demeans them and takes them away from their families.

Hormones, therefore, in one kind of circulation, are a bridge between sex and gender, where the two leak into each other. But, at the same time, in another area of circulation, they are also a bridge between personhood and environment, namely in the way in which medical hormone consumption ends up in the environment through the sewage system and is then found to affect profoundly humans and the animals they consume: “As sex hormones circulate globally they leak between official and unofficial prescription regimes, reconfiguring bodies and socialities by circulating not only through blood, brain, and other body sites but also through social settings” (Sanabria 2016: 19). Such situations provide us with an excellent example of how leakage is transgressive in that it does not only affect who people are by relation to each other, but also who they become by living in a world where substances circulate: “By calling attention to the inherent leakiness of pharmaceuticals (which must dissolve and be absorbed to be effective) and to their pharmacokinetics, bodies and their interstices also cease to appear so skin-bounded. The gut, lungs, skin, and metabolism function, instead, as zones of exchange between bodies and regulatory, postcolonial, and chemically

6. Pollutants in shrimp farming are chemically complex compounds, but they include high doses of hormones—see Tacon and Nates 2002; Ikhwanuddin et al. 2019.



saturated environments” (Hardon and Sanabria 2017: 126). This means that we are increasingly impacted by James’s “ontological wonder-sickness” at the fact that vagueness is out there, with us, in the world; it is not merely a matter of classification, as it is now part of the world’s history (Landecker 2015).

In this way, vagueness is an integral aspect of the circulation of substances more broadly, both between persons *and* between live beings and the rest of the world. Social science discourse, however, is prone to emphasize the first aspect at the expense of the second. Yet, for example, when we agree with Shaun Gallagher’s observation that “our attention to objects changes when others are present” (2009: 302), we are at risk both of emphasizing unduly cognitive aspects at the expense of action, and of being anthropocentric in naturalizing the background scene of an adult person in conscious cognition. This is a problem because we have come to find that perception itself “alters its meaning as a result of social coordination” (De Jaegher and Di Paolo 2007: 16, fn2). Vagueness and participation combine in that they are both aspects of *participatory sense-making*, that is, “the coordination of intentional activity in interaction, whereby individual sense-making processes are affected and new domains of social sense-making can be generated that were not available to each individual on her own” (ibid.: 8). Perception as participatory sense-making is not only mentalistic (as representation), it is out there in the interaction between persons (in their singularity, their plurality, and their multiplicity) and the world. In conclusion, we must not revert to a subject-object dichotomy: while our response to a person is different from our response to an animal, a plant, or a stone, the fact is that there is emergence, participation, and vagueness in the world beyond humans.<sup>7</sup>

Sanabria’s take on leakage is inspired by the earlier work of Anne M. Lovell on the use of synthetic opiates in France in the late 1990s. HDB (buprenorphine) was being used in France for the treatment of problematic opiate use, namely heroin addiction, and had become a major source of revenue to legal pharmaceutical firms, which received considerable government subsidies for developing it. At the same time, in South Asia, HDB was being used as a regular drug of addiction. Lovell observes that:

These two global addiction markets are joined through the process of pharmaceutical leakage, the movement of an addiction pharmaceutical from the site that legitimizes it (the treatment context, in which its commodity status is downplayed before its status as a pharmaceutical or a medicine . . .) to an informal, illicit network (the drug economy, where it morphs into a symbolically charged “dirty” commodity that escapes market and state regulatory mechanism). . . . pharmaceutical leakage and diversion mark the secret life of addiction pharmaceuticals. (Lovell 2006: 138)

HDB, as it was being used in France then, provides us with a useful example of how a single substance turns out to have two lives—it leaks from one sector to another, from licit to illicit use (2006: 156)—and as it leaks between contexts of use, it becomes a different substance, in that it provides different experiences to different people in different circumstances.

In her ethnographic monograph on regimes of menstrual suppression in Bahia, Sanabria carries these ideas one step further by showing how sex hormones function as affordances, becoming constitutive of fields beyond their original settings (2016: 188). In her ethnography, she follows these substances across their trajectories of “medical nomadism” (ibid.: 156). Hormones affect sex according to gender identities and affect gender by providing new sexual affordances. In the process, much in the same way that pollutants (including high doses of hormones) in the waters of the mangroves were forcing fishermen to engage in oppressive work regimes, so in the case of menstrual suppression, hormones were part of a change in modes of body management in relation to work and sexual availability both for middle-class and for lower-class women, but in different ways. The leakage is between regimes of use of objects. But, as these objects become part of people, they revert to their condition as “things”—that is, they come to participate intimately in the persons at stake. In this way, they constitute margins of vagueness making transformation possible.

In sum, when we conjoin participation with vagueness, we are not only dealing with the nature of the emergence of entities in the world but with the fact that worlding is a process of emergence. Long ago, in his time-setting essay concerning the circulation of substances as a background to Indian cosmovisions, McKim Marriott taught us that leakage is what happens when substances circulate between individual entities (1976). Entities participate due to the leakage of the substances that constitute them.

7. Accounts by ethologists of tracking animals and being tracked by them make this point very strongly; see, e.g., Morizot 2018: 128–36.





But the process of *leakage* is part of the entanglement out of which entities emerge—they emerge in a process of singularization that always remains, we have come to learn, incomplete, that is, vague. At different scales, this applies both to the emergence of a person, when it comes to self-reflection through the use of language, and to the emergence of an organism, when it comes to constitute its boundaries by relation to its biological environment. Emergence, therefore, can never involve a radical launch from its launch pad, as it were, since emergence occurs from within entanglement—that is, through a process in which the parts come to interact with the whole. As such, emergence can never be rid of leakage,<sup>8</sup> because the entity's very existence as an entity is dependent on the background upon which it arose.

From the perspective of the entity that is coming to emergence, leakage presents itself as participation. At the end of his life, Lévy-Bruhl came to see this, when he finally observed that participation is not something that happens to persons that are already constituted, since they would not have been constituted at all without participation.

Participation is not simply a mysterious and inexplicable fusion between beings who lose and keep at the same time their identity. It enters into the constitution of these same beings. Without participation they would not have been a given of their own experience: they would not have existed. . . . Participation, therefore, is immanent to the individual as he owes what he is to it. (Lévy-Bruhl 1998: 250)

Yet, on the other hand, from the perspective of the already constituted entity, leakage presents itself as vagueness, that is, as an incapacity to determine fully the entity's boundaries. Thus, leakage, too, is double: on the one hand, part of one body goes into another; on the other hand, there is a feedback effect by means of which the part interacts with the whole. This kind of “leakage,” as such studies call it, deserves our attention here because it helps us to overcome the mentalistic and atomistic dispositions that remain to this day as background assumptions to social scientific debate and that so hindered the midcentury understanding of James's argument by people like Schütz and Garfinkel.

8. Elizabeth Roberts offers “porous” or “permeable” as alternatives, arguing quite usefully that “different penetrations produce different effects” (2017: 597).

Today, therefore, we are encouraged to move beyond the assumed atomistic reduction and to work fully with entanglement, that is, with the notion that “entities do not pre-exist their involvement,” that they emerge through relationality (Kirby 2011: 76).<sup>9</sup> To do this, however, involves necessarily engaging both in transdisciplinarity and in some level of idiosyncrasy—a transgression for which both James and Lévy-Bruhl paid dearly. While both of these dispositions are normally highly praised, they are very seldom actually encouraged by those who police scientific fashion.

### Doors of entanglement

Ambiguity in communication cannot be the only mode of vagueness in social life, for if it were, we would be closed within a semiotic circle, and we would turn “the origin of social facts” into a source of mystery—a divine or societal *fiat*. Durkheim's initial concept of “collective representations” was precisely aimed at bridging that paradox. However, once we abandoned a representationist psychology, the bridge he erected crumbled underneath our feet (see Pina-Cabral 2017). Sociological approaches inspired by Schütz, based on a notion of the “essential ambiguity of the social,” turned out to be insufficient. Bourdieu's formulation of *habitus* does help us to some extent travelling along this road, but it too is insufficient—as Green himself acknowledges, “habitus is too heavily loaded with objectivist meaning” (2019: 129). In line with what contemporary (nonprimitivist) ethnography so clearly reveals, we must move to a model of personal ontogeny that is not atomistic and that roots all human thought in the processes of constitution of the *organism-person* (Ingold 1991).

Meaning (in the sense of sense-making) is a process that occurs to singular organisms but that connects each

9. The main idea that Karen Barad attempts to capture with her concept of “intra-action”: “The neologism ‘intra-action’ signifies the mutual constitution of entangled agencies. That is, in contrast to the usual ‘interaction,’ which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action. It is important to note that the ‘distinct’ agencies are only distinct in a relational, not an absolute, sense, that is, agencies are only distinct in relation to their mutual entanglement; they don't exist as individual elements” (Barad 2007: 33).



one of them to a social existence that precedes that organism. Over the past decades, studies of cognition have revealed that humans engage essentially in two kinds of sense-making: on the one hand, “basic mind,” associated with primary intersubjectivity, is intentional and is shared with other species (Hutto and Myin 2013); on the other hand, “scaffolded mind,” which is associated with secondary intersubjectivity (Trevvarthen 1998), is propositional and dependent on language use. The latter arises from within the former in early personal ontogeny and never moves beyond the constitutive ground of intersubjectivity (Toren 2012). In any case, the theory that meaning is normative and that it is, therefore, not open to naturalist explanation does not stand up to serious scrutiny (see Anandi Hattiangadi’s convincing demonstration, 2006).

James’s vagueness challenges us beyond the mere level of meaning, therefore, since it is anterior to meaning—it lies in the very process of emergence of the bearers of meaning (persons as well as all other live entities). All social acts of communication are acts and, to that extent, they have to be seen as gestures engaged by the communicator in interaction with the world—there is no knowledge that dispenses of the knower. This means that we have to account for the emergence of the thinker within sociality—that is, the emergence of entities that are both singular *and* collective, which leads us back to participation as a condition of being. Vagueness remains paradoxical for as long as it is kept distinct from participation.

An ethnographic theory that aims to bypass primitivist assumptions must account for how entities arise in human sociality within entanglement and never beyond it (Kirby 2011). As Hardon and Sanabria put it, we must “attend to things-in-themselves without desuturing them from the practices and social dynamics within which objects come into being and through which they are made meaningful” (2017: 126). In this regard, space-time and matter have to be seen as aspects of sociality, not as essential conditions of the world—this would seem to be the lesson to take from Barad’s reading of Bohr’s theories of quantum mechanics (2007). This paper argues that, once we mobilize vagueness and participation *together* as conditions of human experience, we can outline two “doors of entanglement.”

The first is the *door of indeterminacy*: vagueness is the condition of that which always remains indeterminate—its boundaries unclear, its entanglement with the environing world never ultimately resolved or severed,

and its causes always either insufficient or excessive. I take recourse here to Davidson’s notion of “interpretive charity” (2001) which grounds human communication not on the sharing of equal items of meaning, but on the best approximation of ultimately indeterminate acts of sense-making.<sup>10</sup> The important aspect is that meaning is not only indeterminate between persons, who understand each other always approximately, but it is also indeterminate within each one of us. Each one of us has become a person in ontogeny to the extent that we have transcended our own condition and achieved, through language, propositional thinking. The kind of secondary intersubjectivity that characterizes adult humans is dependent on personal transcendence and can only be achieved in company. This means that indeterminacy is as much a condition of interpersonal communication as it is of intrapersonal cogitation. In short, that which Heidegger calls *Das Man* (the public aspect of life) is both beyond and within personhood (1962: 165). As ethnographic practitioners, we should learn to avoid all-or-nothing arguments (Pina-Cabral 2009) and we should focus on borders as constitutive (as, in fact, Barth demonstrated so long ago, 1969).

However, the matter cannot be exhausted in this way, as the example of hormone leakage so clearly highlighted. Vagueness, both in the sense of permeability of borders and of ultimate indeterminacy of causation, is a characteristic of life in general and perhaps even, if we are to trust quantum mechanics, of the cosmos as a whole (Wendt 2015; Kirby 2011). Vagueness, therefore, is the very condition of the means-ends approximation that defines rational action in the world. Human action in the world is always characterized by stochastic forms of dynamic encounter, as Gregory Bateson insisted so long ago (Bateson 1979: 245). To simplify, sociality is anterior to communication because each communicating entity only exists to the extent that *an other* created it. The communicating entity emerges from within the process of communication through processes of triangulation—emergence interacts with its background of constitution, it does not cancel it out. In that sense, “charity” is not a choice but a condition. Ethics—that is, the experience of being bound by coresponsibility with the entities that surround us—is the very motor of interpretive charity that allows for

10. I have developed this argument at length elsewhere; see Pina-Cabral 2013 and 2017.



live beings to communicate and to interact teleologically with the world (Pina-Cabral 2020).

The second is the *door of underdetermination*. Again, much like vagueness, when participation was initially identified as a feature of human sociality, it presented itself as paradoxical. From within an atomistic worldview, when Lévy-Bruhl first hit on the evidence of its occurrence, it promised to breach the boundaries of entities. Thus, at first, participation seemed to be inimical to rationality. This is the aporia that drove Lévy-Bruhl's life-long enquiry, but it also challenged Evans-Pritchard when he wrote his Azande ethnography, and equally fascinated Husserl as he formulated his phenomenology. However, if approached in parallel with vagueness as an aspect of metaphysical pluralism, participation need no longer challenge rationality. Rather, it can be seen as describing the mode of emergence of live entities from within entanglement. On the one hand, it describes the observation that humans are always to some extent superimposed on other humans and on other aspects of the world; but, on the other hand, it reveals how, once achieved, the singularity of an entity is never completely reducible.

Participation accounts for the intrinsic fuzziness of the modes of constitution of the social. In sociality, emergence occurs stochastically by the delineation of ever-approximate scales (Bateson 1979: 245; Pina-Cabral 2017: 81–95), but it never comes to absolute completion because it never dispenses with its ground of emergence. The very constitution of live entities depends on a kind of scalar interaction “between wholes and the types of things that are its constituents” (J. Hattiangadi 2005: 85). In the case of persons, too, scalar approximation reimposes itself all the time, since the “I” and the “we” are permutable and interact at different scales (Strathern 1988: 13–14; Pina-Cabral 2017: 112). Participation, therefore, is not only characteristic of human interactions but it is inherent in all the operations of all live beings—it is a feature of intentionality. Participation is an aspect of all live entities to the extent that the processes of mirroring that characterize life as a form of stasis are always incomplete, since entropy can never be completely eradicated from life (Pross 2012).

As Jagdish Hattiangadi put it, “beings are merely stable things, and since things can be stable at different levels of organization and still interact with other levels, all of them are equally real, and none is primary in a metaphysical or atemporal sense” (2005: 98). Live entities are non-wellfounded sets, where the parts interact with the whole (Moss 2014). In other words, the process of emergence involves a dynamic where scale shifting combines

with symmetry in order to constitute singularities (that is, durable states, entities) that, to the extent that they are bounded, are self-referential. This suggests that time has come for us to revisit anthropology's rich heritage of structural methods of analysis. By giving up on atomism, we can start to work again on a mitigated (under-determined) form of structuralist analysis.

Finally, if we prolong our metaphor a little, these two doors of entanglement appear as swing doors, to the extent that they allow movement in both directions. In terms of indeterminacy, vagueness and participation are limitative in that they permit of no absolute determination: entities will ever have fuzzy boundaries and will ever coexist in superimposition. In terms of under-determination, however, vagueness and participation are revealed to be constitutive in that they are conditions for the emergence of entities whose singularity, in that it is emergent, always remains underdetermined.

To conclude, if the above claims are valid, William James's insight has not only been fully vindicated, but it allows us to move significantly beyond the terms of his own position, without for all that having to invalidate it—ours would be a kind of neopragmatism (see Haugeland 1990). The world of humans is foundationally vague both in that it is indeterminate and in that it is underdetermined; and it remains so to the end. As Lévy-Bruhl discovered, logical, conscious, propositional thinking guided by Aristotle's laws of contradiction is not the ultimate seat of thought (Pina-Cabral 2018a). We must cast off that modernist myth, as we have had to cast off so many others. Rather, logical thought is one among other ways of engaging the world and, at best, it is a technically limited condition that cannot in any way account for anyone's thinking—not even the thinking of those who, like me at this moment, struggle to “make sense” and, all too often, are only capable of doing so in limited ways.

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